



November 28, 2017

Director
Air, Pesticides, and Toxics Division
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, TX 75202

RE: Applicability Determination
Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production,
Transmission and Distribution for which Construction, Modification or Reconstruction
Commenced after August 23, 2011, and on or before September 18, 2015 (40 CFR §§
60.5360 *et seq.*) ("Subpart OOOO")

To Whom It May Concern:

This request is submitted for purposes of confirming atmospheric flow-through transfer sumps (as described herein) are classified as "process vessels" and are therefore not subject to Subpart OOOO. For purposes of your determination, the following information is provided.

SUMP DESCRIPTION & OPERATION:

The flow-through transfer sumps are located at natural gas booster stations ("Stations"). The sumps are either vertical or horizontal vessels constructed of non-earthen material, with capacities ranging from twenty-five to eighty barrels ("bbls"), and are located flush with and below ground surface. (See attached drawing representative of a typical flow-through transfer sump). Field gas enters the Station through the inlet separator. Inside the inlet separator, liquids accumulate (*i.e.*, condensate, oil, and produced water) up to a set point controlled by the level controller (varies but generally five to fifteen bbls). When the liquid set point is reached, the liquids are automatically transferred through hard-piping to the flow-through transfer sump by gravity. (See attached flow diagram and P&ID drawings representative of a typical flow-through transfer sump).

The flow-through transfer sumps themselves are equipped with automatic level controllers and evacuation pumps. When the liquid level of the transfer sump reaches the high set point (*i.e.*, approximately eighteen inches from the bottom of the sump), the sump pump activates and pumps the liquid from the sump to the on-site atmospheric condensate storage tanks. Thereafter, during the pumping and transfer process when the liquid level drops to a low set point (*i.e.*, approximately twelve inches from the bottom of the sump), the pump deactivates. Sediments settle out in the bottom of the transfer sumps during this process, and the sumps otherwise function to transfer materials from the inlet separators to the atmospheric storage tanks at the Stations, *i.e.*, they are flow-through transfer sumps. The frequency at which liquids enter and are removed from each transfer sump varies from Station to Station and is dependent on several factors: the amount of liquid contained within the inlet natural gas stream, the set point of the level controllers associated

with the inlet separator and the transfer sump, and the distance from the inlet separator to the transfer sump.

The transfer sumps perform the following primary functions.

1. Transfer of Liquids from the Inlet Separator to the Condensate Storage Tanks -

Depending on the Station, the pressure at the inlet separator (e.g., 5 psig) may be insufficient to overcome the head pressure of the liquids standing in the condensate storage tanks. The sump pump provides the necessary pressure to transfer the liquids from the inlet separator to the condensate storage tanks. Accordingly, the sumps effectively function as flow-through process vessels. That is their function and purpose.

2. Sediment/Sludge Removal –

The liquid level in the transfer sump is maintained at approximately twelve inches so that any entrained solids and sludges that settle out are retained in the sump and prevented from being deposited in the condensate storage tanks. It is easier, more efficient, and results in less emissions to remove the sediment/sludge from a single sump rather than to isolate, de-inventory, and de-gas an entire condensate storage tank battery which may contain three or more tanks. On average, the sediment/sludge is removed from the sumps two to three times per year. Thus, removal of sediment/sludge from the condensate tanks is not required. This is also part of their function and purpose.

SUBPART OOOO DEFINITION OF “STORAGE VESSEL” AND EXCLUSION OF “PROCESS VESSELS”:

For purposes of Subpart OOOO, “storage vessel” is defined in 40 CFR § 60.5430 which states, in relevant part, the following:

Storage vessel means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. ...

For the purposes of this subpart, the following are not considered storage vessels:

...
(2) Process vessels such as surge control vessels, bottoms receivers or knockout vessels... (Emphasis added)

Subpart OOOO was initially proposed on August 23, 2011.¹ Regarding storage vessels subject to Subpart OOOO, the Proposed Rule defined the same as follows:

¹ See 76 Fed. Reg. 52738, herein referred to as the “Proposed Rule.”

[A] stationary vessel or series of stationary vessels that are either manifolded together or are located at a single well site and that have potential for VOC emissions equal to or greater than 10 tpy.²

Following initial proposal, several comments were submitted to the U.S. Environmental Protection Agency ("EPA"). The commenters indicated "units such as process vessels, pressure vessels, knockout vessels, separators, open top pit tanks and tanks that receive pigging fluid should not be included in the definition of storage vessel."³ Conversely, other commenters indicated the EPA should address additional sources of volatile organic compound ("VOC") emissions arising from liquid storage (specifically including sumps) and stated, in relevant part, the following:

Storage vessels are not the only liquid storage systems that emit VOCs. Well cellars, sumps, and even pools of oil can and do emit substantial VOCs, which are controlled by several different state regulators. EPA must include standards for such sources based upon these available controls.

Examples of such controls are plentiful, especially among the California air districts. In particular:

...

- The Santa Barbara County Air Pollution Control District requires regular pumping of well cellars.^[fn1. omitted] It also bars all "primary sumps" -- that is, any sump that receives oil and produced water directly from field gathering or production systems -- and requires that all pits and post-primary sumps (which receive their liquids after separation processes) be replaced with tanks or covered, with a vapor recovery unit.^{[fn1. omitted];⁴}

In response, EPA determined process vessels and knockout vessels were specifically excluded from being storage vessels:

The EPA agrees with the commenters that process vessels, pressure vessels, and knockout vessels should all be excluded from the definition of storage vessel. Process and knockout vessels are typically used within a process to collect material from one unit before being transferred to another, and thus are not used for storage. (Emphasis added)⁵

Further, EPA elected not to include sumps as storage vessels in the promulgated regulation as specifically requested in the Sierra Club Comment.⁶

² *Id.* at 52810.

³ See "Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 40 CFR Parts 60 and 63, Response to Public Comments on Proposed Rule August 23, 2011 (76 FR 52738)" (herein referred to as "Response to Comments") at p. 110.

⁴ See Comment submitted by Craig H. Segall, Sierra Club et al., posted December 1, 2011, EPA ID: EPA-HQ-OAR-2010-0505-4240 at pp. 53 and 54 (herein referred to as the "Sierra Club Comment").

⁵ See Response to Comments at 110.

⁶ *Id.* at pp. 49 and 50.

On August 16, 2012, EPA promulgated Subpart OOOO.⁷ In the preamble to the final rule, EPA summarized the previously submitted comments and its responses regarding the definition of storage vessel and stated, in relevant part, the following:

Comment: Numerous commenters commented on the definition of storage vessel in 40 CFR part 60, subpart OOOO, calling for greater clarity and consistency and requesting that certain activities or equipment be included or excluded from the definition.

Response: The EPA agrees with the commenters who assert that a more specific and consistent definition of a storage vessel is needed. The revised definition more clearly focuses on identifying which units are considered storage vessels under this subpart and which units are not and describes a storage vessel using terminology similar to that used in 40 CFR part 63, subpart HH. ... Finally, the revised definition includes specific exemptions for process vessels and pressure vessels to clarify that these units are not considered storage vessels. ... (Emphasis added)⁸

The EPA subsequently granted reconsideration of several provisions of Subpart OOOO, including the definition of “storage vessel,” and requested comment.⁹ In responding to comments on the proposed revisions to Subpart OOOO, EPA stated, in relevant part, the following regarding the exclusion of process vessels from being classified as storage vessels:

Concerning process vessels, the storage vessel definition provides examples of process vessels that include surge control vessels, bottoms receivers and knockout vessels. The vessel in question would need to have a similar use to be considered a process vessel.¹⁰

Subpart OOOO does not define “process vessel” or the referenced examples of the same.¹¹ Notwithstanding, vessels with similar uses as surge control vessels, bottoms receivers, and knockout vessels, as well as vessels serving a transfer function (*i.e.*, collecting material from one

⁷ See 77 Fed. Reg. 49490.

⁸ Id. at 49524.

⁹ See 78 Fed. Reg. 22126, April 12, 2013.

¹⁰ See “Oil and Natural Gas Sector: Reconsideration of Certain Provisions of New Source Performance Standards, 40 CFR Part 60, Response to Public Comments on Proposed Rule (78 FR 22126; April 12, 2013)” dated July 2013, at 20.

¹¹ Although not directly applicable, the following definitions provide some indication as to the meaning of surge control vessel and bottoms receiver.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within a process unit (as defined in the specific subpart that references this subpart) when in-processing storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further downstream processing.

[40 CFR § 63.161, Subpart H – National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks (40 CFR Part 63); *see also*, 40 CFR § 63.1101, Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards (40 CFR Part 63)]. Although a relevant definition of “knockout vessel” could not be identified, such term generally refers to a piece of equipment (*e.g.*, tank, vessel, etc.) designed to disengage and/or remove entrained liquids and/or solids within a product stream.

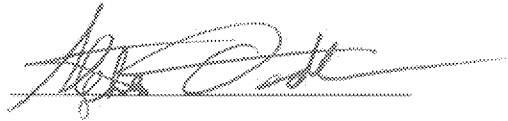
unit before being transferred to another), are specifically indicated as being process vessels and thereby excluded from being storage vessels under Subpart OOOO.¹²

Per the above, process vessels (*e.g.*, surge control vessels, bottoms receivers and knockout vessels as well as vessels which have similar uses) and vessels that collect and transfer material from one unit to another are not "storage vessels" subject to Subpart OOOO. Further, given EPA's specific consideration of sumps during the promulgation of Subpart OOOO and its decision not to include the same within storage vessels subject to Subpart OOOO, sumps are not considered to be "storage vessels." Based on the stated purpose and function of the flow-through transfer sumps at the Stations (*i.e.*, transfer of liquids from the inlet separator to the condensate storage tanks and removal of sediment/sludge similar to, if not the same as, surge control vessels, bottoms receivers, and knockout vessels), the flow-through transfer sumps are classified as "process vessels." Accordingly, the same would not be classified as "storage vessels" and would not be subject to Subpart OOOO.

Following your receipt and review, please do not hesitate to contact me should you have any questions or need any further information regarding the above matter.

Sincerely,

Stephen Ondak
Env Manager - MidCon

A handwritten signature in black ink, appearing to read 'Stephen Ondak', is written over a horizontal dotted line.

Encl.

¹² See fn. 5, *supra*.